Mutually Overcharged Partially-Insulated Diode Cells with Cyclical Flow Exchange for Efficient Phase and Polarity-Uniforming of Light without Amplitude Loss

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Introduction

Although methods exist for the uniforming of the polarity of light, these methods have certain disadvantages. Polarity filtering, for example, allows for all light except for that of a specific polarity to be filtered, leaving only the light of the desired polarity, but this results in an extreme loss of amplitude. Magnetic fields can be used to uniform the polarity of light without amplitude loss, but the fields required are powerful and the magnets needed to achieve this are large and are usually arrayed in a series, meaning that the mechanism takes up too much space for this to be practical for certain applications.

Applications such as semiconductor manufacturing now require that partial waveforms be used in order to create increasingly miniaturized transistors from wafers. The polarity of the light generated is just as important as the phase at these scales, but a mechanism is required which can allow for the EUV light, after it is generated using a method which certainly does not shape the polarity of light, to retain its full amplitude whilst bestowing upon the operator control over phase and polarity.

Abstract

Two nano-scale voltage cells may be collocated in such a way so that the overcharge of the voltage cells (undesirable in a voltage storage system) may be made to bring about arcing between the cells. In this case, the arcing would be deliberately brought about by insulating square voltage cells on three sides, with the fourth side remaining uninsulated (the side facing the other voltage cell in the pair.) Graphene or hexa-boron nitride may be used as an insulator.

Furthermore, these would not be ordinary voltage cells, but diodes, i.e. they permit the flow of current only in one direction. Thus, one diode would be positive on one side and negative on the other and the opposing diode would also feature a positive and a negative side and the relative position of these zones would be flipped for the opposing diode.

Electricity would be siphoned through arcing from the negative side of one diode in a loop over to the positive side of the cell on the opposing side. From there, flow would be physically restricted in a single direction so that this loop could continue ad infinitum provided that some supplementary current could be added to offset any losses.

The result would be two arcs, each moving in exactly opposing but predictable directions.

Ordinarily, passing light through an electrical arc would alter the angular momentum of the light in a way which is undesired, but because there would be two arcs moving in opposing directions, the angular momentum would be restored after a brief “jog” and, after the completion of this maneuver, the polarity of the light would be entirely changed depending upon the relative position of the arcing diodes. Partial insulation should be applied to the fourth side to allow for further precision in the arc location and to ensure that the electron siphon is not disrupted through arcing in unintended directions.

Importantly, the amount of energy needed and the volume of space needed to perform this task is substantially lesser than that which a solid-state or electromagnet would require to perform the same task.

The reason why this would be the case is because when the photons pass through the first arc, their spin is reset to the position called “top of phase,” and after passing through the second arc, they are set to “bottom of phase.” Provided that the distance between the two arcs is equal to the wavelength of the light being polarity-shaped, this configuration of arcs would result in the snapping-in of the desired polarity over a distance equal to a single wavelength.

Emplacing the partially insulated diode pairs in a rotating nano-housing would allow for a pulse of light to be made to strike a substrate at a particular series of positions resembling short lines and for a successive pulse to be made to strike along a different line. This would allow for different shapes to be etched such as “plus signs” or “diamonds,” which may be useful in circuit design. This would be more like chiseling a straight line with a chisel than trying to chisel a straight line by repeatedly striking something with a Phillips-head screwdriver.

Conclusion

It is also worth pointing out that if polarity can be absolutely controlled without amplitude loss, it becomes practical to deploy two polarity and phase-controlled beams (this method controls for both) strategically in order to bring about precision phase cancellations which allow for the point-injection of light at a single point along a phase.